AMENDMENTS TO THE CLAIMS

Claims 1-12 (Cancelled).

13. (New) A boring device comprising:

a boring tool;

a guide for restricting a moving direction of said boring tool;

a vibrator for applying ultrasonic vibrations to said boring tool to make said boring tool jump, said vibrator and said boring tool being discrete members unattached to each other such that said boring tool jumps and separates from said vibrator when said vibrator applies the ultrasonic vibrations to said boring tool; and

a float retention member for retaining said boring tool in a floating state at a specified position, and for generating a restoration force to return said boring tool at least to a position where said boring tool contacts said vibrator when said boring tool is displaced from the specified position.

14. (New) The boring device according to claim 13, wherein said float retention member is operable to return said boring tool to the specified position when said boring tool is displaced from the specified position.

15. (New) The boring device according to claim 14, wherein said vibrator is operable to repeatedly apply the ultrasonic vibrations to said boring tool.

16. (New) The boring device according to claim 13, further comprising a pressing device for pressing said vibrator towards said boring tool.

17. (New) The boring device according to claim 16, wherein said vibrator is operable to repeatedly apply the ultrasonic vibrations to said boring tool.

18. (New) The boring device according to claim 13, wherein said vibrator is operable to repeatedly apply the ultrasonic vibrations to said boring tool.

19. (New) The boring device according to claim 13, wherein said boring tool has a spherical surface for contacting said vibrator.

20. (New) The boring device according to claim 13, wherein said boring tool comprises a punch having a head and a processing portion to be applied against a workpiece, said guide having a guide hole for guiding said head of said punch therein.

21. (New) The boring device according to claim 20, wherein said float retention member comprises a spring retained within said guide hole.

22. (New) The boring device according to claim 20, wherein said head of said boring tool has a spherical surface for contacting said vibrator.

23. (New) The boring device according to claim 13, further comprising a die having a holding surface for holding a workpiece against said boring tool, said die having a boring hole extending therethrough and tapered outwardly away from said holding surface.

24. (New) A boring method of boring an object, said method comprising:

retaining a boring tool in a floating state at a specified position inside a guide that restricts a moving direction of the boring tool;

applying ultrasonic vibrations to the boring tool using a vibrator to displace the boring tool and make the boring tool jump towards the object to be bored, the vibrator and the boring tool being discrete members unattached to each other such that the boring tool jumps and separates from the vibrator during said applying of the vibrations to the boring tool by the vibrator;

making the boring tool strike the object to be bored due, at least in part, to said applying of the ultrasonic vibrations; and

returning the boring tool having been displaced from the specified position at least up to a position where the boring tool comes into contact with the vibrator.

25. (New) The boring method according to claim 24, wherein said returning comprises returning the boring tool having been displaced from the specified position to the specified position.

26. (New) The boring method according to claim 25, wherein said applying of the ultrasonic vibrations comprises repeatedly applying the ultrasonic vibrations to the boring tool.

27. (New) The boring method according to claim 24, further comprising pressing the boring tool towards the object to be bored during said applying of the ultrasonic vibrations to the boring tool using the vibrator.

28. (New) The boring method according to claim 27, wherein said applying of the ultrasonic vibrations comprises repeatedly applying the ultrasonic vibrations to the boring tool.

29. (New) The boring method according to claim 24, wherein said applying of the ultrasonic vibrations comprises repeatedly applying the ultrasonic vibrations to the boring tool.

30. (New) The boring method according to claim 24, wherein said applying of the ultrasonic vibrations comprises applying the ultrasonic vibrations against a spherical surface of the boring tool.